

Online Discovery and Mapping of Great Lakes Climate Change Education and Scientific Research Activities: Building an Online Collaborative Learning Community of Scientists and Educators

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The Great Lakes Climate Change Science and Education Systemic Network (GLCCSESN) project is an NSF-funded CCEP program awarded in 2011 to a partnership including Eastern Michigan University, NOAA-Great Lakes Environmental Research Lab, University of Michigan, Michigan State University, Ashland University, Graham Institute for Sustainability, Ann Arbor Hands On Museum and College of Exploration.

As one of the project partners the College of Exploration (www.coexploration.org) has conducted a series of online surveys, workshops and focus groups to identify a wide range of organizations, individuals, resources and needs related to climate change education and research activities in and about the Great Lakes Region and to provide information about climate change science to the education community.

MAP

information about research activities & educational resources; relationships among individuals and organizations

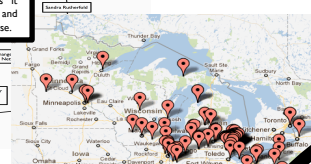
Social Network Map of Individuals and Organizations

Shows the relationships among organizations and individuals. As it evolves, suggests potential coalitions and partnerships based on common purpose.



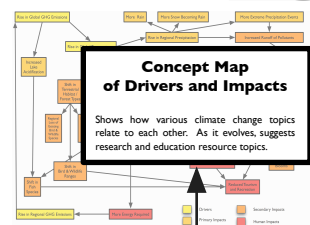
Geo Map of Individuals and Organizations

Provides a visual representation of activities and resources. As it evolves, suggests where to find scientific research and educational resources.



Concept Map of Drivers and Impacts

Shows how various climate change topics relate to each other. As it evolves, suggests research and education resource topics.



Identify Individuals and Organizations Working on Climate Change in the Great Lakes

Identify individuals and organizations working on climate change in the Great Lakes.

Identify Scientific Research on Climate Change in the Great Lakes

Identify Educational Resources for Teaching about Climate Change in the Great Lakes

COLLABORATE

Online communication technologies have helped broaden the participation and representation in the GLCCSESN from all states/provinces in the Great Lakes region and from diverse audiences and stakeholders, including scientists, educators, and journalists, etc.

The Project moves through multiple big and small cycles of learn, map, explore and create phases - identifying and mapping education and research activities and developing and implementing a plan to support / enhance these activities.

Climate Change - Great Lakes Website

(<http://greatlakesclimate.org>)
 Features news, resources, activities and a dynamic online map of individuals and organizations concerned about climate change in the Great Lakes.

Online Collaborative Learning Community of Scientists and Educators

Online Needs Assessment Survey

(June 2011)
 An online survey tools posed questions about their understanding of climate science and climate change, their concerns or perspectives as professionals and general demographic data. Responses came from 22 scientists, 51 K-12 classroom teachers, 40 teacher/educators, 100 university faculty members, 24 museum/zoo informal educators, 29 community/agency informal educators and 117 journalists.

Online Professional Development Workshop

(November 2011)
 After Dr. Don Scavia's streaming video presentation summarizing Great Lakes climate science and a live webinar about climate and Great Lakes Literacy, over 200 participating educators and scientists from across the region shared their own teaching and research work and experience.

Online Community Focus Groups

(November 2011)
 Following the workshop, 6 different online focus groups were conducted. Their purpose was to review current educational resources for their audiences and to identify gaps and needs for further educational programs, materials and resources. The online format supported widespread participation across the Great Lakes region.

EXPLORE

patterns of needs and resources; developing knowledge

F2F Community Focus Groups

Discussion of the same questions asked of the online focus group participants.

F2F Planning Workshops

By focusing on similarities and differences in the perspectives of scientists, education practitioners and learning sciences on the state of climate science and education, broader impact and future education needs, generate a strategy plan for overcoming any obstacles and bridging the gaps between the science and education and recommendations for programs, activities and resources to enhance climate education for this community.

Planning Document and Implementation Plan

Online Planning Space

(Winter 2012)
 Supports the face to face (f2f) planning meetings of scientists, educators and government officials to merge the two white papers.

Climate Science and Education / Learning Science White Papers

Climate science whitepaper will include an overview of the breadth and scope of recent and ongoing climate research in the region - not only the state of science and research outcomes, but the players and their interconnections.

Climate education / learning science whitepaper will include an overview of the state of climate education in the region both in theory and in practice as well as a synthesis of the inventory of resources and practices in current use and needs identified via previous needs assessments and from information provided by focus group participants.

LEARN

by collecting data
 - about scientists, educators and others
 - about science research
 - about educational resources

CREATE

actions based on an understanding of principles

